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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,075	07/10/2001	Kemal Guler	10014768	9384

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EXAMINER	
CHANDLER, SARA M	
ART UNIT	PAPER NUMBER
3693	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/903,075	GULER ET AL.	
	Examiner	Art Unit	
	Sara Chandler	3693	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 July 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

In view of the appeal brief filed on 06/04/07, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

8-30-07

James Kramer.

This Office Action is responsive to Applicant's Appeal and request for reconsideration of application 09/903,075 (07/10/01) filed on 06/04/02.

Claim Interpretation

1. In determining patentability of an invention over the prior art, all claim limitations have been considered and interpreted as broadly as their terms reasonably allow. See MPEP § 2111.

> Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).
>
> Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. *In re Pruter*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). See MPEP § 2111.

2. All claim limitations have been considered. Additionally, all words in the claims have been considered in judging the patentability of the claims against the prior art. See MPEP 2106 II C. The following language is interpreted as not further limiting the scope of the claimed invention. See MPEP 2106 II C.

Language in a method claim that states only the intended use or intended result (e.g., "*for*_____"), but the expression does not result in a manipulative difference in the steps of the claim. Language in a system claim that states only the intended use or intended result (e.g., "*for*_____"), but does not result in a structural difference between the claimed invention and the prior art. In other words, if the prior art structure is capable of performing the intended use, then it meets the claim.

Claim limitations that contain statement(s) such as "*if, may, might, can could*", as optional language. As matter of linguistic precision, optional claim elements do not narrow claim limitations, since they can always be omitted.

Claim limitations that contain statement(s) such as "*wherein, whereby*", that fail to further define the steps or acts to be performed in method claims or the discrete physical structure required of system claims.

USPTO personnel should begin claim analysis by identifying and evaluating each claim limitation. For processes, the claim limitations will define steps or acts to be performed. For products, the claim limitations will define discrete physical structures or materials. Product claims are claims that are directed to either machines, manufactures or compositions of matter. See MPEP § 2106 II C.

> The subject matter of a properly construed claim is defined by the terms that limit its scope. It is this subject matter that must be examined. As a general matter, the grammar and intended meaning of terms used in a claim will dictate whether the language limits the claim scope. Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. The following are examples of language that may raise a question as to the limiting effect of the language in a claim:
>
> (A) statements of intended use or field of use,
> (B) "adapted to" or "adapted for" clauses,
> (C) "wherein" clauses, or
> (D) "whereby" clauses.
>
> See MPEP § 2106 II C.

3. Independent claims are examined together, since they are not patentable distinct. If applicant expressly states on the record that two or more independent and distinct inventions are claimed in a single application, the Examiner may require the applicant to elect an invention to which the claims will be restricted.

Oath/Declaration

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the citizenship of each inventor. Joint inventor Tongwei Liu failed to include citizenship.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 9 and 17 are rejected under 35 U.S.C 101 because the invention fails to provide a useful, concrete and tangible result. The evaluating step is unclear because it is uncertain how the evaluation occurs (i.e., evaluating mean, variance etc.) and how one would use that information to determine a result. See also discussion under 112, second paragraph.

Claims 9 and 17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are mixing statutory classes. See also discussion under 112, second paragraph.

Dependent claims are further rejected based on the same rationale as the claims from which they depend.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Re Claims 1,9 and 17:

The claimed invention recites:

selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market;

Applicants specification recites:

A bidding model specifies a bidding behavior pattern. It is a function of auction characteristics or procedure of the corresponding auction. It is also a function of the market structure of the auction. (Applicant's Specification, pg. 18, line 20+ - col. 19, line 1)

Which identifies the required elements used for selecting the bidding model?

Dependent claims are also rejected based on the same rationale as the claims from which they depend.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re Claims 1,9 and 17: The meaning of characteristics of said market is indefinite. What are the characteristics of the market? E.g., Could just saying the market is an auction be sufficient. If it is something more, what is it?

Re Claims 1,9 and 17: The meaning of bidding model is indefinite. What is the bidding model? What elements are required to select it?

Re Claims 1,9 and 17: The meaning of estimated structure is indefinite. What is the estimated structure? How is it selected? How does the estimated structure tie in with the other claim limitations? E.g., The specification says that a collection of variables are required to estimate the structure of the market however this is never addressed in the claims.

> "Market structure" is intended to mean a collection of variables that describe the factors that may affect the bidding behavior of bidders. A market structure is characterized by two sets of variables: a first set of variables collectively describes the auction "environment," and a second set of variables collectively describes the auction "mechanism." (Applicant's Specification, pg. 25, lines 5-10)

Re 1,9 and 17: The meaning of bidding behavior is indefinite. How can specifying bidding behavior be a requirement of the bidding model (as claimed)? Yet the bidding model is used to predict bidding behavior (as claimed)? Which comes first? Also, are specified and predicted bidding behaviors different in some way?

Re 1,9 and 17: What are the outcomes to be expected? How are they used to make a determination? Are they evaluated from a bidder or seller perspective? E.g., Are you looking for the highest or lowest price? Once you have this information, how do you know what is preferred?

The term "relevant bidding model" in claims 1,9 and 17 is a relative term which renders the claim indefinite. The term "relevant" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

In summation, claims 1,9 and 17 indefinite because: a) The scope of the claims are unclear. Terms such as "structure", "characteristics of said market" are broad, abstract concepts. b) There is insufficient correlation or interrelationship among the steps. c) There is no requirement of the claim to produce a result (i.e., the claim has not outputted a result). d) The evaluating step is unclear. How does the evaluating occur (i.e., evaluating mean, variance etc.)? e) The claims recite the limitation "relevant bidding model" it is unclear what is meant by relevant.

Re Claims 9-16: The claim is indefinite because the preamble recites a system claim however, the following limitation would imply that the system performing method steps. The suggested language would indicate that it is programmed to do those things.

Claim 9 recites:

> a processor interconnected with said bus, wherein said processor executes a method for determining an auction format for a market, said method comprising the steps of:

Suggested language:

> a processor interconnected with said bus, wherein said processor is programmed to execute a method for determining an auction format for a market, said method comprising the steps of:

As to dependent claims 10-16, they are drawn to system claims but, they recite method steps. What structural components are used?

Re Claims 17-24: The preamble is indefinite because it appears to be mixing statutory classes.

Claim 17 recites:

> A computer readable medium for causing a computer system to execute the steps in a method for determining a auction format for a market, said method comprising the steps of:

A variation on the following language is suggested:

> A computer readable medium having computer readable program code for determining a auction format for a market, the computer executable code performing steps comprising:

> A computer-readable medium having computer-executable instructions for determining a auction format for a market, the computer-executable instructions performing steps comprising:

As to dependent claims 18-24, are you claiming the computer readable medium or the method?

Re Claims 2, 10 and 18: The claim recites the limitation "first user input." Who is the user (i.e., bidder, seller)? Does it matter?

The claim recites the limitation "auction characteristics data." How is this different than the characteristics of said market?

The term "similar items" in claim 2 is a relative term which renders the claim indefinite. The term "similar" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Re Claims 3,11 and 19: The claim recites the limitation "auction characteristics data." How is this different than the characteristics of said market?

Re Claims 4,12 and 20: The claim recites the limitation "unobservable variables." What is this? Variables of what?

The claim recites the limitation "observable bids." What is this? Are these related to the historical bids or are they something different?

The claim recites the limitation "estimated latent structure of said market" What is this? How is it estimated? How is it different than the estimated structure?

Should "said bid model" be -- said bidding model --?

Re Claims 5,13 and 21: The claim recites "wherein said bidding model has embedded an unknown structure, and wherein said predicting a bidding behavior step comprises the steps of:" Is the bidding model a function of the unknown structure also? Are you referring to both the predicting a first bidding behavior step and the predicting a second bidding behavior step? How is the unknown structure different than the estimated latent structure and the estimated structure?

Re Claims 6,14 and 22: The claim recites the limitation "second user input." Who is the user (i.e., bidder, seller)? Does it matter?

The claim recites the limitation "an evaluation criterion." What is this?

The claim recites the limitation "constraint." What is this?

The claim recites the limitations "predicting a first outcome of said market step", "said estimated structure", "said bidding behavior", "said first predicted outcome." Are you referring to both the predicting a first outcome step and the predicting a second

outcome step? Are you referring to both the first bidding behavior and the second bidding behavior? Are you referring to both the first estimated structure and the second estimated structure? Are you referring to both the first outcome and second outcome?

Re Claims 7,15 and 23: The claim recites the limitation "third user input." Who is the user (i.e., bidder, seller)? Does it matter?

The claim recites the limitation "evaluating said first outcome of said market step", Are you referring to evaluating a first outcome and evaluating at least a second second outcome?

The claim recites the limitation "descriptive statistics." What is this? How is it descriptive?

Should "said plurality" be -- said plurality of candidate auction formats --?

Re Claims 8,16 and 24: The claim recites the limitation "evaluating said first outcome of said market step", Are you referring to evaluating a first outcome and evaluating at least a second outcome? The claim recites the limitation "highest ranking." What is this? How is it descriptive?

Claim 8,16 and 24 recite the limitation "the highest said ranking". There is insufficient antecedent basis for this limitation in the claim. Is this ranking with the highest calculated mean?

Should "said plurality" be -- said plurality of candidate auction formats --?

Dependent claims are further rejected based on the same rationale as the claims from which they depend.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1,3,4,6,7,8,9,11,12,14,15,16,17,19,20,22,23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seymour, US Pat. No. 6,871,190.

Re Claim 1: Seymour discloses a method for determining an auction format for a market, said method comprising the steps of:

selecting characteristics of said market (See Seymour, Col. 5, lines 31-36);

selecting a relevant bidding model specifying bidding behavior that utilizes information held privately by a bidder and said characteristics of said market (See Seymour, Col. 4, lines 49-51, "A series of bidding and selling strategies are then generated for each type of auction type"; col. 4, line 30+ - col. 5, line 15; col. 6, lines 1-12; col. 6, lines 1-12; col. 3, lines 3-51; col. 4, lines 49-51; col. 6, line 56 - col. 7, line 13);

selecting at least a first and a second estimated structure of said market (See Seymour, Col.4, lines 30-49 and Col. 5, lines 11-15);

predicting a first bidding behavior utilizing said first estimated structure of said market, said characteristics of said market and said relevant bidding model (See Seymour, Col. 5, lines 7-15, The recommendations to the seller and/or bidder regarding how to bid and/or sell is based on a prediction of the bidding behavior of the various bidders);

predicting a first outcome of said market based on said first bidding behavior (See Seymour, Col. 6, lines 56-59, "The input data is transmitted to the processing unit of the seller site terminal and the optimum type of auction for sale of such merchandise is determined (e.g., Sealed bid, Vickery, English or Dutch)." In order to determine the optimum auction format the data regarding the auction including the seller, bidders and merchandise is used to evaluate and compare what the predicted outcome would be for each auction format (e.g. Sealed bid, Vickery, English or Dutch);

predicting at least a second bidding behavior utilizing at least said second estimated structure of said market, said characteristics of said market and said relevant bidding model (See Seymour, Col. 5, lines 7-15, The recommendations to the seller and/or bidder regarding how to bid and/or sell is based on a prediction of the bidding behavior of the various bidders);

predicting a second outcome of said market based on at least said second bidding behavior (See Seymour, Col. 6, lines 56-59, "The input data is transmitted to the processing unit of the seller site terminal and the optimum type of auction for sale of such merchandise is determined (e.g., Sealed bid, Vickery, English or Dutch)." In order

to determine the optimum auction format the data regarding the auction including the seller, bidders and merchandise is used to evaluate and compare what the predicted outcome would be for each auction format (e.g. Sealed bid, Vickery, English or Dutch); and evaluating said first outcome of said market and at least said second outcome of said market to determine an auction format for said market (See Seymour, Col. 6, lines 56-59, "The input data is transmitted to the processing unit of the seller site terminal and the optimum type of auction for sale of such merchandise is determined (e.g., Sealed bid, Vickery, English or Dutch)." In order to determine the optimum auction format the data regarding the auction including the seller, bidders and merchandise is used to evaluate and compare what the predicted outcome would be for each auction format (e.g. Sealed bid, Vickery, English or Dutch).

Intended Use: The limitation stating that the evaluating step is , "to determine an auction format for said market" is a statement of intended use. Thus, "to determine an auction format for said market" has not been given patentable weight.

Seymour fails to explicitly disclose selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market (See Seymour, Col. 4, lines 49-51, "A series of bidding and selling strategies are then generated for each type of auction type"; col. 4, line 30+ - col. 5, line 15; col. 6, lines 1-12; col. 6, lines 1-12; col. 3, lines 3-51; col. 4, lines 49-51; col. 6, line 56 - col. 7, line 13);

Official Notice is taken that it is old and well-known that information held by a buyer (e.g., amount they are willing to pay, risk tolerance etc.) coupled with their

understanding of existing market conditions (e.g., rules, demand etc.) influences behavior. For example, investment decisions, auctions, purchasing decisions.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Seymour to provide a method further comprising: selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market.

One would have been motivated to make the method adaptable to changing auction environments.

Re Claim 9: Seymour discloses a computer system comprising (See Seymour, Figs. 2 and 3, Inherently the computer system of Seymour comprises a bus, memory interconnected to said bus and a processor interconnected with said bus. Figs. 2 and 3 provide a graphical illustration of how the system works):

a bus (See Seymour, Figs. 2 and 3);

a memory interconnected with said bus (See Seymour, Figs. 2 and 3); and

a processor interconnected with said bus, wherein said processor executes a method for determining an auction format for a market (See Seymour, Figs. 2 and 3), said method comprising the steps of:

selecting characteristics of said market (See Seymour, Col. 5, lines 31-36);

selecting a relevant bidding model specifying bidding behavior utilizing information held privately by a bidder and said characteristics of said market (See Seymour, Col. 4, lines 49-51, "A series of bidding and selling strategies are then generated for each type of

auction type"; col. 4, line 30+ - col. 5, line 15; col. 6, lines 1-12; col. 6, lines 1-12; col. 3, lines 3-51; col. 4, lines 49-51; col. 6, line 56 - col. 7, line 13);

selecting at least a first and a second estimated structure of said market (See Seymour, Col.4, lines 30-49 and Col. 5, lines 11-15);

predicting a first bidding behavior utilizing said first estimated structure of said market, said characteristics of said market and said relevant bidding model (See Seymour, Col. 5, lines 7-15, The recommendations to the seller and/or bidder regarding how to bid and/or sell is based on a prediction of the bidding behavior of the various bidders);

predicting a first outcome of said market based on said first bidding behavior (See Seymour, Col. 6, lines 56-59, "The input data is transmitted to the processing unit of the seller site terminal and the optimum type of auction for sale of such merchandise is determined (e.g., Sealed bid, Vickery, English or Dutch)." In order to determine the optimum auction format the data regarding the auction including the seller, bidders and merchandise is used to evaluate and compare what the predicted outcome would be for each auction format (e.g. Sealed bid, Vickery, English or Dutch);

predicting at least a second bidding behavior utilizing at least said second estimated structure of said market, said characteristics of said market and said relevant bidding model (See Seymour, Col. 5, lines 7-15, The recommendations to the seller and/or bidder regarding how to bid and/or sell is based on a prediction of the bidding behavior of the various bidders);

predicting a second outcome of said market based on at least said second bidding behavior (See Seymour, Col. 6, lines 56-59, "The input data is transmitted to the processing unit of the seller site terminal and the optimum type of auction for sale of such merchandise is determined (e.g., Sealed bid, Vickery, English or Dutch)." In order to determine the optimum auction format the data regarding the auction including the seller, bidders and merchandise is used to evaluate and compare what the predicted outcome would be for each auction format (e.g. Sealed bid, Vickery, English or Dutch); and

evaluating said first outcome of said market and at least said second outcome of said market to determine an auction format for said market (See Seymour, Col. 6, lines 56-59, "The input data is transmitted to the processing unit of the seller site terminal and the optimum type of auction for sale of such merchandise is determined (e.g., Sealed bid, Vickery, English or Dutch)." In order to determine the optimum auction format the data regarding the auction including the seller, bidders and merchandise is used to evaluate and compare what the predicted outcome would be for each auction format (e.g. Sealed bid, Vickery, English or Dutch).

Intended Use: The limitation stating that the evaluating step is , "to determine an auction format for said market" is a statement of intended use. Thus, "to determine an auction format for said market" has not been given patentable weight.

Seymour fails to explicitly disclose a system further comprising selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market (See Seymour, Col. 4, lines

49-51, "A series of bidding and selling strategies are then generated for each type of auction type"; col. 4, line 30+ - col. 5, line 15; col. 6, lines 1-12; col. 6, lines 1-12; col. 3, lines 3-51; col. 4, lines 49-51; col. 6, line 56 - col. 7, line 13);

Official Notice is taken that it is old and well-known that information held by a buyer (e.g., amount they are willing to pay, risk tolerance etc.) coupled with their understanding of existing market conditions (e.g., rules, demand etc.) influences behavior. For example, investment decisions, auctions, purchasing decisions.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Seymour to provide a system further comprising selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market.

One would have been motivated to make the method adaptable to changing auction environments.

Re Claim 17: A computer readable medium for causing a computer system to execute the steps in a method for determining a auction format for a market, said method comprising the steps of:

selecting characteristics of said market (See Seymour, Col. 5, lines 31-36);

selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market (See Seymour, Col. 4, lines 49-51, "A series of bidding and selling strategies are then generated for each type of auction type"; col. 4, line 30+ - col. 5, line 15; col. 6, lines 1-

12; col. 6, lines 1-12; col. 3, lines 3-51; col. 4, lines 49-51; col. 6, line 56 - col. 7, line 13);

selecting at least a first and a second estimated estimating structure of said market (See Seymour, Col.4, lines 30-49 and Col. 5, lines 11-15);

predicting a first bidding behavior utilizing said first estimated structure of said market, said characteristics of said market and said relevant bidding model (See Seymour, Col. 5, lines 7-15, The recommendations to the seller and/or bidder regarding how to bid and/or sell is based on a prediction of the bidding behavior of the various bidders);

predicting a first outcome of said market based on said first bidding behavior (See Seymour, Col. 6, lines 56-59, "The input data is transmitted to the processing unit of the seller site terminal and the optimum type of auction for sale of such merchandise is determined (e.g., Sealed bid, Vickery, English or Dutch)." In order to determine the optimum auction format the data regarding the auction including the seller, bidders and merchandise is used to evaluate and compare what the predicted outcome would be for each auction format (e.g. Sealed bid, Vickery, English or Dutch);

predicting at least a second bidding behavior utilizing at least said second estimated structure of said market, said characteristics of said market and said relevant bidding model (See Seymour, Col. 5, lines 7-15, The recommendations to the seller and/or bidder regarding how to bid and/or sell is based on a prediction of the bidding behavior of the various bidders);

predicting a second outcome of said market based on at least said second bidding behavior (See Seymour, Col. 6, lines 56-59, "The input data is transmitted to the

processing unit of the seller site terminal and the optimum type of auction for sale of such merchandise is determined (e.g., Sealed bid, Vickery, English or Dutch)." In order to determine the optimum auction format the data regarding the auction including the seller, bidders and merchandise is used to evaluate and compare what the predicted outcome would be for each auction format (e.g. Sealed bid, Vickery, English or Dutch); and

evaluating said first outcome of said market and at least said second outcome of said market to determine an auction format for said market (See Seymour, Col. 6, lines 56-59, "The input data is transmitted to the processing unit of the seller site terminal and the optimum type of auction for sale of such merchandise is determined (e.g., Sealed bid, Vickery, English or Dutch)." In order to determine the optimum auction format the data regarding the auction including the seller, bidders and merchandise is used to evaluate and compare what the predicted outcome would be for each auction format (e.g. Sealed bid, Vickery, English or Dutch).

Intended Use: The limitation stating that the evaluating step is , "to determine an auction format for said market" is a statement of intended use. Thus, "to determine an auction format for said market" has not been given patentable weight.

Seymour fails to explicitly disclose a computer readable medium further comprising: selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market.

Official Notice is taken that it is old and well-known that information held by a buyer (e.g., amount they are willing to pay, risk tolerance etc.) coupled with their

understanding of existing market conditions (e.g., rules, demand etc.) influences behavior. For example, investment decisions, auctions, purchasing decisions.

It would have been obvious to one of ordinary skill in the art at the time the invention was made a computer readable medium further comprising: selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market.

One would have been motivated to make the method adaptable to changing auction environments.

Re Claims 3,11 and 19: Seymour further discloses the method/system/computer readable medium, wherein said selecting a relevant bidding model step comprises the steps of:

receiving said auction characteristics data(See Seymour, Col. 5, lines 29-36);

accessing a database (See Seymour, Col. 5, lines 21-25, The patent discusses data gathering exercises. A database is being accessed to retrieve the data);

retrieving from said database a relevant bidding model (See Seymour, Col. 4, lines 49-51, "A series of bidding and selling strategies are then generated for each type of auction type"), wherein said bidding model is selected based on a corresponding relevance of said auction characteristics data (See Seymour, Col. 5, lines11-15, Input data is processed and used to determine the optimum values for the reserve bid price and for the starting bid price); and

outputting said relevant bidding model (See Seymour, Col. 6, lines 56-65, The optimum values for the reserve bid price and for the starting bid price are displayed for the seller).

Re Claims 4,12 and 20: Seymour further discloses the method/system/computer readable medium, wherein said estimating a structure of said market step comprises the steps of:

receiving said relevant bidding model (See Seymour, Col. 4, lines 49-51, "A series of bidding and selling strategies are then generated for each type of auction type");

receiving said bids data (See Seymour, Col. 5, lines 21-25, The patent discusses data gathering exercises and it can be inferred that a data base is accessed to retrieve the data).

Seymour fails to explicitly disclose a method wherein said estimating a structure of said market step comprises the steps of: expressing unobservable variables in terms of observable bids, wherein said unobservable variables are expressed in terms of observable bids by inverting said bid model; transforming said bids data to a sample of inverted bids,wherein said bids data are transformed by inverting said bid model; estimating an estimated latent structure of said market, wherein said sample of inverted bids receives application of statistical density estimation techniques to obtain said estimated structure; and outputting said estimated structure. Official Notice is taken however, that: to express unobservable variables in terms of observable variables; to create a sample of the data; to use the sample to generate a statistical distribution of the sample data; to make estimates or assumptions about the market; and to report

upon or generate an output of the results is old and well-known. It is common practice in fields such as mathematics, statistics and economics to use these methodologies for the purpose of using historical data, reasonable assumptions, etc.to make predictions or estimations about the future (e.g., economic predictions, research studies). Thus, it would have been obvious to one of ordinary skill in the art to modify the teachings of Seymour in light of the Official Notice for the purpose of estimating the structure of said market based on the historical data on record.

Re Claims 6,14 and 22: Seymour further discloses the method/system/computer readable medium, wherein said predicting a first outcome of said market step comprises the steps of:

receiving a second user input, wherein said second user input comprises the step of (See Seymour, Col. 6, lines 56-59): an evaluation criterion (See Seymour, Col. 4, line 67, Col. 1-2, Col. 6, lines 56-59, From the language of the patent the evaluation criteria used to determined the optimum type of auction is based on an evaluation of the profit generated or loss incurred); a candidate auction format (See Seymour,Col. 6, lines 56-59); and a constraint (See Seymour,Col. 6, lines 56-59, The mention of "strategy parameters" is interpreted to mean that there are constraints placed);

receiving said estimated structure (See Seymour, Col.4, lines 30-49 and Col. 5, lines 11-15);

receiving said bidding behavior prediction for said candidate auction format, wherein said bidding behavior prediction further comprises a prediction under said constraint (See Seymour, Col. 5, lines 7-15, The recommendations to the seller and/or

bidder regarding how to bid and/or sell is based on a prediction of the bidding behavior of the various bidders);

obtaining a value of said evaluation criterion, wherein said value is based on said estimated structure, said bidding behavior prediction, said candidate auction format, and said constraint, said value comprising said first predicted outcome (Seymour, Col. 4, line 67; Col.5, lines 1-2 and 11-15; Col. 6, lines 56-59, There must be a value for the evaluation criterion (e.g., profit generated or loss incurred) in order to compare the different selling strategies. Further, this value is able to change depending on specific data inputs which influence the estimated structure, bidding behavior prediction, candidate auction format and said constraint); and

outputting said value ((Seymour, Col. 6, lines 63-67, discussion of a display screen and customer confirmation).

Re Claims 7,15 and 23: Seymour further discloses the method/system/computer readable medium, wherein said evaluating said first outcome of said market step comprises the steps of:

receiving a third user input, wherein said third user input comprises a plurality of candidate auction formats (See Seymour, Col. 6, lines 56-59);

Seymour fails to disclose a method wherein said evaluating said first outcome of said market step comprises the steps of: receiving a predicted outcome for each said candidate auction format; calculating descriptive statistics for each said candidate auction format, wherein said descriptive statistics comprise a mean and a variance; ranking each said candidate auction format with respect to said calculated mean and

generating corresponding rankings for said plurality; and outputting said descriptive statistics and said rankings. Official Notice is taken that receiving a predicted outcome for different scenarios; calculating statistics for each scenario (e.g., mean, variance); ranking scenarios in ascending or descending order in regards to which is the best option; and reporting upon or generating an output of the results is old and well known. It is common practice is fields such as mathematics, statistics and economics to use these methodologies for the purpose of comparison and decision-making (e.g., product purchase decisions; evaluating business opportunities etc.). Thus, it would have been obvious to one of ordinary skill in the art to modify the teachings of Seymour in view of the Official Notice for the purpose of evaluating an auction format, comparing different auction formats and ultimately making a decision about the optimal auction format.

Re Claims 8,16 and 24: Seymour further discloses a method/system/computer readable medium, wherein said evaluating said first outcome of said market step comprises the steps of:

selecting a best auction format, wherein said best auction format comprises the candidate auction format within said plurality having the highest said ranking (See Seymour, Col. 6, lines 56-59); and

outputting said best auction format (See Seymour, Col. 6, lines 56-59 and Col. 6, lines 63-65. The optimum auction format is determined and displayed on the screen for the seller).

Thus, it would have been obvious to one of ordinary skill in the art to modify the teachings of Seymour in view of the Official Notice for the purpose of evaluating an

auction format, comparing different auction formats and ultimately making a decision about the optimal auction format.

Claims 2,5,10,13,18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seymour, U.S. Patent No. 6,871,190 in view of Shoham, U.S. Patent No. 6,285,989.

Re Claims 2,10 and 18: Seymour further discloses the method/system/computer readable medium as recited in Claim 1, wherein said selecting characteristics of said market step comprises the steps of:

receiving a first user input, wherein said first user input comprises information identifying an item to be auctioned (See Seymour, Col. 6, lines 42-50);

accessing a database (See Seymour, Col. 5, lines 21-25, The patent discusses data gathering exercises. A database is being accessed to retrieve the data); and

retrieving from said database auction characteristics data (See Seymour, Col. 5, lines 29-36),

Seymour fails to explicitly disclose wherein said selecting characteristics of said market step comprises the steps of: retrieving from said database historical bids data; wherein said auction characteristics comprise information relating to historical auctions of similar items; and outputting said auction characteristics data.

Shoham discloses wherein said selecting characteristics of said market step comprises the steps of:

retrieving from said database historical bids data (See Shoham, Col.14, lines 25-32, There is a discussion regarding the retrieval of statistics and results of auctions; and time stamps for the events record of historical data);

retrieving from said database auction characteristics data, wherein said auction characteristics comprise information relating to historical auctions of similar items (See Shoham, Col. 14, lines 25-32);

outputting said bids data (See Shoham, Col. 14, lines 25-32); and

outputting said auction characteristics data. (See Shoham, Col. 14, lines 25-32).

It would have been obvious to one of ordinary skill in the art to modify the teachings of Seymour to include the teachings of Shoham. As Shoham suggests retrieving data (e.g., historical bids data, auction characteristics data) and outputting data (e.g., bids data, auction characteristics data) is necessary for analysis, auditing and publication. Also, as Shoham suggests the ability to retrieve and output data is beneficial when modifying the software to provide relevant auction formats in different situations. The motivation would have been to continuously improve and adapt the software.

Re Claims 5,13 and 21: Seymour further discloses the method/system/computer readable medium, wherein said predicting a bidding behavior step comprises the step of:

outputting a prediction of bidding behavior (See Seymour, Col. 5, lines 7-15, The patent is interpreted broadly. The recommendations to the seller and/or bidder

regarding how to bid and/or sell is based on a prediction of the bidding behavior of the various bidders).

Seymour fails to explicitly disclose wherein said bidding model has embedded an unknown structure; wherein said predicting a bidding behavior step comprises the steps of: receiving said estimated structure; receiving said relevant bidding model; and substituting said estimated structure for said unknown structure.

Shoham discloses wherein said bidding model has embedded an unknown structure (See Shoham, Col. 13, lines 48-50, The factors (e.g., rules, constraints) associated with each bidding model allow the specific structure of the market to be changed or augmented. The estimated structure applied generally to each bidding model can be adapted to the unknown structure of a particular auction); and

wherein said predicting a bidding behavior step comprises the steps of:

receiving said estimated structure (See Shoham, Col. 13, lines 1-6 and lines 32-45 and 38-42. Shoham is interpreted as disclosing that bidding models differ in terms of both the services; and the market and system conditions required. Factors (e.g., rules,constraints) such as minimum bids, bidding increments, length of rounds are relevant in creating an appropriate structure for the different bidding models). Thus, for each estimated structure received there is relevant bidding model that is also received);

receiving said relevant bidding model (See Shoham, Col. 13, lines 1-6 and lines 32-45 and 38-42. Shoham is interpreted as disclosing that bidding models differ in terms of both the services; and the market and system conditions required. Factors (e.g., rules,constraints) such as minimum bids, bidding increments, length of rounds are

relevant in creating an appropriate structure for the different bidding models). Thus, for each estimated structure received there is relevant bidding model that is also received);

and substituting said estimated structure for said unknown structure (See Shoham, Col. 13, lines 48-50, The factors (e.g., rules, constraints) associated with each bidding model allow the specific structure of the market to be changed or augmented. The estimated structure applied generally to each bidding model can be adapted to the unknown structure of a particular auction).

It would have been obvious to one of ordinary skill in the art to modify the teachings of Seymour to include the teaching of Shoham because Shoham teaches a specific way to implement the predicting a bidding behavior step already introduced in Seymour. The motivation would have been to provide sellers and bidders with predictions regarding the bids likely to occur so as to aid their selection of the type of auction format to engage in different market situations.

Response to Arguments

Applicant's arguments have been fully considered but they are not persuasive.

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Applicant's arguments filed 11/27/06 have been fully considered but they are not persuasive. As best the newly added limitations are understood, the reference still reads on it.

Applicant argues, Seymour fails to disclose or teaches away from selecting a relevant bidding model specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market;

Although not explicitly stated, the bidding strategy in Seymour (i.e., bidding model) makes selecting a bidding behavior as a function of information held privately by a bidder and said characteristics of said market obvious.

Seymour discloses a bidding model (Seymour, Col. 4, lines 49-51).

In applicant's disclosure the relevance of information, particularly private information, is discussed at various times (See Disclosure, pg. 13, lines 20- pg. 14, line 4; pg. 16, lines 19+ -pg. 17, line 10; pg. 24, lines 18+ - pg. 23, line 3). On, pg. 20 of the disclosure applicant discloses that consideration is made for the distribution of bidders' private information in the decision-making regarding the auctions. Seymour, similarly considers the distribution of bidders' private information by estimating the minimum, maximum value and valuation range bidders' will likely place on the auctioned items (Seymour, col. 4, line 30+ - col. 5, line 15). On pg.24 of the disclosure applicant provides, as an example of private information, a bidder's willingness to pay for the auction items. Seymour describes a bidding strategy for a bidder that requires data input from the bidder (Seymour, col. 4, lines 1-10). Seymour goes on to describe how the data input includes the price the bidder is willing to pay (Seymour, col. 6, lines 1-12);

Applicant's disclosure discusses the characteristics of the market (See Disclosure, pg. 24, lines 12-16; pg. 25, lines 11-15; pg. 26, lines 17-20). The market is described as comprising two components: market environment (e.g., characteristics of auctioned item see pg..25 of Disclosure) and characteristics of the market mechanism (e.g., English, Dutch, Vickrey etc. pg. 26 of Disclosure). Seymour also provides for characteristics of the auctioned item (Seymour, pg. 6, lines 1-12) and the auction

mechanism (Seymour, col. 3, lines 3-51; col. 4, lines 49-51; col. 6, line 56 - col. 7, line 13).

Although the private information and characteristics of the market are not explicitly discussed as being a function of the bidding behavior. It is old and well-known that information held by a buyer (e.g., amount they are willing to pay, risk tolerance etc.) coupled with their understanding of existing market conditions (e.g., rules, demand etc.) influences behavior. For example, investment decisions, auctions, purchasing decisions.

Thus, Seymour makes obvious a bidding model (i.e., bidding strategy) specifying bidding behavior as a function of information held privately by a bidder and said characteristics of said market.

Applicant argues, Seymour fails to disclose predicting a bidding behavior;

The claimed invention is not limited to predicting the behavior of an individual bidder as suggested in pg. 19 of applicant's arguments (6/16/06). The claimed invention states "predicting a bidding behavior" which is broad enough to cover the bidding behavior of all the various bidders. The recommendations to the seller and/or bidder regarding how to bid and/or sell is based on a prediction of the bidding behavior of the various bidders.

Applicant argues, Seymour fails to disclose predicting a first outcome of said market; and evaluating said first outcome of said market.

Applicant's disclosure describes the interrelationship between the bidding behavior, auction format and outcome (See Disclosure, pg. 15, lines 5-17). Similarly, in

order to determine the optimum auction format the data regarding the auction including the seller, bidders and merchandise is used to evaluate and compare what the predicted outcome would be for each auction format (e.g. Sealed bid, Vickery, English or Dutch) (Seymour, Col. 6, lines 56-59).

Applicant argues, the prior art teaches away.

[A] reference will teach away if it suggests that the line of development flowing from the reference's disclosures is unlikely to be productive of the result sought by the applicant. In re Gurley, 31 USPQ2d 1130 (Fed. Cir. 1994).

Remarks

Applicant is encouraged to contact the Examiner and request an interview if further guidance is necessary to advance prosecution or address claim deficiencies.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references relate to auctions.

("5818914"|"5835896").PN.

"The Simple Economics of Optimal Auctions," by Jeremy Bulow and John Roberts. The Journal of Political Economy, Vol. 97, No. 5. (Oct., 1989), pp. 1060-1090.

"Auction Format Matters: Evidence on Bidding Behavior and Seller Revenue," by Robert A. Feldman and Vincent Reinhart. International Monetary Fund. Staff Papers – International Monetary Fund; Jun 1996; 43,2; ABI/INFORM Global. Pg. 395.

"Auctions: Theory and Applications," by Robert A. Feldman and Rajnish Mehra. IMF Staff Papers. Vol. 40, No. 3 (September 1993).

"A theoretical and empirical investigation of multi-item on-line auctions," by Ravi Bapna, Paulo Goes and Alok Gupta. Information Technology and Management; 2000; 1, 1-2; ABI/INFORM Global pg. 1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara Chandler whose telephone number is 571-272-1186. The examiner can normally be reached on 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Kramer can be reached on 571-272-6783. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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